

Notice of Allowability

Application No.

09/944,317

Examiner

Christopher L. Lavin

Applicant(s)

PARAGIOS ET AL.

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 06/12/06.
2. ☒ The allowed claim(s) is/are 1-16.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Donald B. Paschburg (reg. No. 33,753) on 8/09/06.

The application has been amended as follows:

In line 2 of claim 1 after "a background reference" replace "frame" with -- model comprising of a plurality of states --

In line 9 of claim 1 after "a most probable background reference" replace "frame" with -- state --

In line 2 of claim 2 after "a background reference" replace "frame" with -- model --

In line 2 of claim 4 after "a background reference" replace "frame" with -- model --

In line 2 of claim 7 after "a background reference" replace "frame" with -- model --

In line 4 of claim 8 after “a background reference” replace “frame” with -- model comprising of a plurality of states --

In line 10 of claim 8 after “a most probable background reference” replace “frame” with -- state --

In line 2 of claim 9 after “a background reference” replace “frame” with -- model --

In line 2 of claim 11 after “a background reference” replace “frame” with -- model --

In line 2 of claim 14 after “a background reference” replace “frame” with -- model --

In line 2 of claim 15 after “a background reference” replace “frame” with -- model comprising of a plurality of states --

In line 8 of claim 15 after “a most probable background reference” replace “frame” with -- state --

Allowable Subject Matter

2. Claims 1 – 16 are allowed.
3. The following is an examiner’s statement of reasons for allowance:

The art of record does not teach nor does it suggest the specific features called for in the claims. The concept of using Markov Random Fields (MRF) to deal with occlusion in target tracking is well known as shown by Kamijo. However using MRF where the background frame is chosen from a plurality of frames based on which frame is the most probably background is not taught in the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion


4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
5. Kamijo et al, 'Traffic Monitoring and Accident Detection at Intersections' IEEE Transactions on Intelligent Transportation Systems, vol. 1, no.2, June 2000 – discloses using MRF to deal with target tracking in areas where there is often target occlusion.
6. Stenger et al. 'Topology Free Hidden Markov Models : Application to Background Modeling' Computer Vision, 2001. ICCV 2001. Proceedings. Eighth IEEE International Conference on Volume 1, 7-14 July 2001 Page(s):294 - 301 vol.1 – discloses using HMMs to model a subway platform's background.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher L. Lavin whose telephone number is 571-272-7392. The examiner can normally be reached on M - F (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M. Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher Lavin



BHAVESH M. MEHTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600